REMARKS

Applicants acknowledge receipt of the Examiner's Office Action dated December 1, 2006. This Office Action is non-final and rejects Claims 1-37. Specifically, Claims 1-37 were rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,118,761 issued to Kalkunte et al. (Kalkunte) in view of U.S. Patent Application Publication No. 2002/0048280 filed by Lee et al. (Lee). In light of the following remarks, Applicants respectfully request the Examiner's reconsideration and reexamination of all pending claims.

Independent Claim 1 recites:

> A method comprising:
>
> a transmitting device transmitting data at a first non-zero rate to a memory for storage therein during a first period of time;
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> the transmitting device transmitting data at a second non-zero rate to the memory for storage therein during a second period of time;
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> the transmitting device transmitting data at a third non-zero rate to the memory for storage therein during a third period of time;
>
> wherein the third period of time is subsequent to the second period of time, and wherein the second period of time is subsequent to the first period of time, and;
>
> wherein the third non-zero rate is greater than the second non-zero rate, and wherein the second non-zero rate is greater than the first non-zero rate.

Independent Claim 1 recites a transmitting device transmitting data to a memory at three non-zero rates. Independent Claim 1 was rejected under 35 U.S.C. §103 as being unpatentable over Kalkunte in view of Lee. In rejecting independent Claim 1, the Office Action asserts Kalkunte discloses a single transmitting device transmitting data at three non-zero rates to a memory. The Office Action cites to column 8, lines 15-60 of Kalkunte as teaching a transmitting device transmitting data at the third non-zero rate to the memory storage therein. Applicants have

reviewed column 8, lines 15 60 and can find no teaching or fair suggestion of a transmitting device transmitting data at three non-zero rates. Rather, column 8, lines 15-60 of Kalkunte describe transmitting three data packets at a single, constant rate. For the Examiner's convenience, Applicants reproduce column 8, lines 15-60 below:

> As shown in FIG. 4, the method begins in step 60 by the network node receiving the desired transmission rate (r.sub.a) from the network switch 12. The network node 14 then transmits a first data packet (P1) in step 62 according to full-duplex Ethernet protocol. The node 14 then calculates a delay time (D1) based upon the desired transmission rate (r.sub.a) and the size of the first data packet (P1), described below, and waits in step 64 the determined delay time (D1) before transmitting a second data packet (P2) in step 66. As described below, the duration of the delay time is directly proportional to the size of the transmitted data packet. Hence, if the transmitted data packet (P1) has a large size, i.e., a large number of bytes, the delay time (D1) has a longer duration to maintain an overall constant output transmission rate.
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> After transmitting the second packet (P2) in step 66, the node 14 will wait for a second delay time (D2) in step 68 based on the size of the second data packet (P2) and the desired transmission rate. After transmission of the third data packet (P3) in step 70, the node 14 will wait a third delay time (D3) in step 72 based upon the size of the third data packet (P3) and the desired transmission rate. Hence, the delay time between transmissions is calculated on a per-packet basis to ensure that the output transmission rate corresponds to the desired transmission rate.
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> FIG. 5 is a flow diagram illustrating a method of calculating the delay times D1, D2 and D3 of FIG. 4. The disclosed methods may be implemented in the network node 14 by embedding executable code within a memory element within the MAC within the network node 14. The MAC in the network node 14 starts in step 80 by receiving the rate control frame from the network switch 12 a rate control frame identifying the assigned bandwidth value (r). The MAC may also receive in step 80 the predetermined network transmission rate (R), also referred to as the wire rate. After storing the assigned bandwidth value and the wire rate in step 82, the node 14 begins accessing the media by setting the delay time equal to the minimum interpacket gap (IPG) interval of 96 bit time (e.g., 0.96 ms for a 100 Mb/s network). A similar IPG interval may be determined for a 1000 Mb/s network.
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> After setting the delay time to the minimum IPG in step 84, the

> network node 14 starts the delay timer in step 86, which causes the network node 14 to wait the set delay time (D).

The foregoing teaches transmitting three data packets P1–P3 with delayed times therebetween. The delay times between the three packets are calculated based upon the size of the data packet. Specifically, the delay time between transmissions of data packets is calculated on a per packet basis to ensure a constant transmission rate. For example, as set forth above, if the transmitted data packet P1 has a large size, i.e., a large number of bytes, the delay time (D1) has a longer duration to maintain an overall constant output transmission rate. Clearly, the foregoing establishes that packets P1-P4 are transmitted at one non-zero rate, not at three non-zero rates. Importantly, at no point does column 8, lines 15-60 of Kalkunte teach that the constant rate at which the packets P1-P3 are transmitted, is different than the first and second non-zero rates allegedly taught in column 1, lines 40-60 and column 5, lines 55-67. See pages 2 and 3 of the Office Action.

Notwithstanding, the Office Action admits that Kalkunte does not expressly disclose a third non-zero rate that is greater than the second non-zero rate, and wherein the second non-zero rate is greater than the first non-zero rate, as required by independent Claim 1. Again, Applicants assert that nothing within column 8, lines 15-60 indicates that the data rate at which the network switch 12 transmits data is different from the alleged first and second non-zero transmission rates allegedly taught in column 1, lines 40-60 and column 5, lines 55-67 of Kalkunte. The Office Action asserts that Lee discloses transmitting data at a third non-zero rate which is greater than a second non-zero rate, and wherein the second non-zero rate is greater than the first non-zero rate citing paragraphs 44, 54-60, 62, and 68 of Lee in support thereof. Applicants have reviewed these paragraphs of Lee and find no teaching or fair suggestion of transmitting data at three consecutively greater transmission rates. It is clear from the Office

Action the Examiner is defining transmission rate as the quantity of data transmitted during a given period of time. Indeed, column 8, lines 15-60 of Kalkunte is cited for this proposition. The cited paragraphs of Lee, on the other hand, are concerned with an arbitration scheme for selecting an order in which packets from various input use are transmitted to an output queue, and the scheme is based upon packet weight and priority. As an aside, it is noted that while the cited paragraphs of Lee are concerned with transmitting data packets to a single memory (i.e., an output buffer), the data is transmitted from several devices (i.e., several input queues), not a single transmission device. Nonetheless, as noted above the cited paragraphs of Lee teach an arbitration scheme for electing the order in which data packets are transmitted to an output port based upon the weights and priorities of the packets stored within input queues. At best, the cited paragraphs of Lee might teach a device which is capable of transmitting a data at three consecutively greater transmission rates; however, the cited paragraphs of Lee do not expressly or inherently teach transmitting data at three consecutively greater transmission rates. Applicants request the Examiner to provide citation to a reference which expressly or inherently discloses a device for transmitting data at three consecutively greater transmission rates rather than providing citations to paragraphs that describe a device that might be able to transmit data at three consecutively data non-zero transmission rates. Applicants reserve the right to contest the stated reasons for combining Kalkunte and Lee.

Dependent Claim 6 cites:

> The method of claim 5 further comprising:
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> comparing the first data quantity value to a plurality of predetermined values, wherein the first predetermined value is one of the plurality of first predetermined values;
>
> wherein the rate control signal is generated in response to comparing the first data quantity value to the plurality of predetermined values.

This claim is very narrow and recites comparing a first data quantity value to a plurality of predetermined values. Claim 6 also recites that the rate control signal is generated in response to this comparison. The Office Action cites column 5, lines 25-55 of Kalkunte as teaching these limitations. Applicants have reviewed column 5, lines 25-55 and can find no teaching or fair suggestion of generating a rate control signal based upon a comparison of a first data quantity value to a plurality of predetermined values. As noted in dependent Claim 5, from which Claim 6 depends, the first data quantity value represents a quantity of data storage in the memory device. Column 5, lines 25-55 of Kalkunte describe generating a rate control signal; however, this rate control signal is generated if the instantaneous rate of input to the memory device is greater than the output rate memory device for a period of time T. At best, column 5, lines 25-55 of Kalkunte teach comparing instantaneous input rate to output rate, which is a single rate, not a plurality of output rates. Dependent Claim 6 clearly requires generating a rate control signal based upon a comparison of one value to a plurality of values. Accordingly, Applicants submit that dependent Claim 6 is patentably distinguishable over the cited sections of Kalkunte.

Independent Claim 10 recites limitations similar to those of independent Claim 1 argued above. Specifically, independent Claim 10 recites that the third non-zero transmission rate is greater than the second non-zero transmission rate, and wherein the second non-zero transmission rate is greater than a first non-zero transmission rate. However, in rejecting independent Claim 10, the Office Action ignores these limitations. Specifically, the Office Action does not assert that Kalkunte or Lee teaches or fairly suggests a third non-zero transmission rate which is greater than a second non-zero transmission rate, and wherein the second non-zero transmission rate is greater than the first non-zero transmission rate. Rather, the Office Action on page 6 only asserts that Kalkunte teaches a second non-zero rate which is greater than or less than a first non-zero rate; there is no mention of the third non-zero

transmission rate. As such, Applicants assert that the Office Action has failed to teach a *prima facie* basis for rejecting independent Claim 10 as being unpatentable over the combination of Kalkunte and Lee.

Independent Claim 24 also recites a third non-zero rate which is greater than a second non-zero rate. Claim 24 also recites a first non-zero rate. While independent Claim 24 recites a first non-zero rate, independent Claim 24, unlike independent Claim 10, recites that the second non-zero transmission rate is greater than or less than the first non-zero rate. Like independent Claim 10, the Office Action does not address the third non-zero transmission rate in rejecting independent Claim 24. Accordingly, Applicants submit that the Office Action has failed to establish a *prima facie* basis for rejecting independent Claim 24 as being unpatentable over Kalkunte in view of Lee.

Independent Claims 29-31 were rejected with the same rationale for rejecting Claims 1-27. Applicants have shown that independent Claims 1, 10, and 24 are patentably distinguishable over the cited sections of Kalkunte and Lee. Claims 2-8, 11-16, and 25-27 depend directly or indirectly from independent Claims 1, 10, and 24. Insofar as independent Claims 1, 10, and 24 have been shown to be patentably distinguishable over the cited sections of Kalkunte and Lee, it follows that all Claims 1-27 are likewise patentably distinguishable over the cited sections of Kalkunte and Lee. Because Claims 1-27 are patentably distinguishable over the cited sections of Kalkunte and Lee, it follows that Claims 28 and 37 are likewise patentably distinguishable.

CONCLUSION

Applicants submit that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on February 27, 2007.

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